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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Chu
Serial No.: 09/326,308
Filed: June 7, 1999
Priority FR 98 08842 Filed: July 9, 1998
Group Art Unit: 3634
Examiner: G. Strimbu
Title: VEHICLE WINDOW ARRANGEMENT HAVING
AN ANGLED OPENING FOR INSERTING A
CABLE END DURING ASSEMBLY

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APPEAL BRIEF

Box AF
Assistant Commissioner of Patents
Washington, D.C. 20231

Dear Sir:

The Notice of Appeal in this application was filed on April 12, 2002. Appellant now submits its brief in the above-referenced application.

Real Party in Interest

Meritor Light Vehicle Systems-France LLC is the real party in interest.

Related Appeals and Interferences

There are no related appeals or interferences.

Status of the Claims

Claims 20-27 and 36-43 stand finally rejected. Claims 20-27 and 36-43 were rejected under 35 U.S.C. §112, second paragraph; claims 20-25, 36-38 and 41-43 were rejected under the judicially created doctrine of obviousness-type double patenting; claims 36-38 were rejected

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under 35 U.S.C. §102(b); claim 36 was rejected under 35 U.S.C. §102(e); claims 20-25, 36-38 and 41-43 were rejected under 35 U.S.C. §103.

Claims 26, 27, 39 and 40 have been indicated as containing allowable subject matter. Despite Appellant's attempts to present those claims rewritten in independent form to obtain allowance of this case, the Examiner has refused to enter any such amendment.

Status of Amendments

Appellant filed a proposed amendment subsequent to the final rejection, which placed the case in condition for allowance because it included the subject matter indicated by the Examiner as being allowable into the remaining independent claims. Instead of entering the amendment, the Examiner sent an advisory action alleging a §112 issue. While Appellant disagrees with the Examiner on that issue, Appellant attempted to address the Examiner's concerns by submitting a second proposed amendment after final. Another advisory action indicating a *different*, new §112 issue was sent by the Examiner. After a telephone conference with the Examiner, Appellant's representative again submitted a proposed response attempting to address the Examiner's alleged concerns under 35 U.S.C. §112 (even though Appellant disagrees with the Examiner that the claims needed any change). The most recent response was submitted by facsimile on April 5, 2002, and then again on April 12, 2002 (because it allegedly was not received at the PTO on April 5). Appellant has not received any indication from the Examiner whether that proposed amendment would be entered.

Summary of the Invention

Vehicle door window lifter arrangements typically include at least one cable partially wound about a drum that is rotated to cause the desired movement of the window. A variety of challenges are presented to designers and users of such arrangements. One challenge has been to find an efficient, economical way to facilitate manufacturing the arrangement while facilitating winding an appropriate portion of the cable around the drum during the assembly process. While prewinding a cable has been used, that proves difficult in manipulating the various components and maintaining the appropriate amount of tension on the cable through the manufacturing process.

This invention presents a significant improvement in that it allows for inserting a cable around a portion of the drum for easy manufacture. Additionally, this invention represents an

advantageous improvement in that it decreases the overall size of the assembly required to accommodate the cable on the drum.

The invention includes a cable 3 that is wound around grooves on a drum 4. A hood 6 and a support plate 5 support the drum 4. The hood has a sidewall extending along a portion of its length at a first radial dimension. The hood includes a tunnel 13 that is a passage portion having a second, larger radial dimension. The passage portion or tunnel 13 and the drum flange 16 cooperate to guide and support an end 15 of the cable prior to the end 15 being inserted into an opening 17 in the flange 16 from the tunnel side of the flange. The opening 17 and the flange 16 accommodates the end of the cable in a manner that makes installation easier and allows for reducing the overall height of the drum 4 (as prior designs required the end of the cable being supported on the drum itself, which necessitated lengthening the drum).

The inventive arrangement includes a guide tunnel established by the cooperation of the hood 6 and the flange 16 for manually inserting an end of the cable 3 during the assembly process so that the end of the cable can pass through the guide tunnel before being received in the opening 17. The illustrated example embodiment includes a ramped surface 18 near the opening 17 to further facilitate cable insertion.

Independent claim 20 recites a drum including a flange extending radially outward and having an opening extending axially through the flange. A hood has a sidewall partially surrounding the drum with the sidewall cooperating with a portion of the drum flange to form an arcuate passage. A second end of the cable is received through the arcuate passage and into the opening in the flange.

Independent claim 36 recites that the hood has a sidewall with a portion at a first radial dimension and a passage portion having a second, larger radial dimension. The passage portion and the drum flange cooperate to form a tunnel that guides and supports an end of the cable prior to the end being inserted into the opening in the flange. The dependent claims on appeal recite various additional structural features.

Issues

Whether the final rejections under 35 U.S.C. §112, which were raised for the first time in the final office action, are warranted when the language of the claims is clear, especially in light of the Examiner's continued refusal to enter an amendment after final addressing the Examiner's changing concerns.

Whether the final rejections under 35 U.S.C. §102(b) or (e) are proper when none of the art of record shows the claimed combination of a drum and hood where a drum flange and a portion of the hood cooperate to form a passage for guiding the end of a cable at least partially around the drum until the end of the cable is received in an opening through the flange.

Whether the final rejections under 35 U.S.C. §103 are proper where the references, even when combined do not constitute an arrangement as recited in Appellant's claims and where there is no suggestion or motivation within the art to make the combinations proposed by the Examiner.

Grouping of Claims

The Examiner has already admitted that claims 26, 27, 39 and 40 contain allowable subject matter.

The rejections of claims 20-27 and 36-43 are contested. Claims 21-27 depend from claim 20. Claim 21 is separately patentable. Claims 22-24 stand or fall together but are separately patentable from the other claims. Claim 25 is separately patentable. Claims 26 and 27 were indicated as allowable but objected to for depending from a rejected base claim. Claims 37-43 depend from claim 36. Claims 37 and 38 each are separately patentable. Claims 39-40 were objected to but indicated as allowable. Claims 41-43 stand or fall together but are separately patentable from the other claims.

Argument

INTRODUCTION

The claims are clear and there is no proper basis for a rejection under 35 U.S.C. §112. The claims are not anticipated because none of the prior art shows the claimed combination. None of the claims are obvious because even the combinations proposed by the Examiner are

not the same as Appellant's claimed invention and there is no proper motivation or suggestion within the art to make the Examiner's proposed combinations.

THE CITED REFERENCES

A. United States Patent No. 4,191,060 ("the *Sessa* reference")

The *Sessa* reference discloses a vehicle window glass lifting mechanism that addresses the pre-tensioning problem of the operative wire (or cable) by including a rupturable dowel as stated in column 1 of the *Sessa* reference, the problem addressed by the teachings of that reference was to avoid oversizing the winding device by having a tensioning device incorporated into the glass lifting mechanism, "in which the diameter of the crenellated wheel coupled to the drum through the unidirectional clutch does not exceed the drum diameter." (*Sessa* reference, column 1, lines 58-66.)

The Examiner cites the *Sessa* reference for what is shown in figures 2, 5 and 7 as an unlabeled recess for receiving an end 12 of the cable in the portion 13 of the device. Even that, however, is not the same as the opening in the drum flange recited in Appellant's claims.

Importantly, there is no suggestion or use for a "hood" within the *Sessa* reference.

B. United States Patent No. 4,421,299 ("the *Hess* reference")

The *Hess* reference shows a window cable driving mechanism that has a drum 4 "enclosed by a bracket 6" having bearing surfaces 14, 16 that cooperate with cylindrical rolling surfaces 10 and 12 at the ends of the drum 4. As can be appreciated from the drawings, there must be contact between the bearing surfaces and the rolling surfaces for the drum to be accurately supported in the position required by the *Hess* reference. Because there must be such contact, there is no possible motivation for changing the bracket 6 of the *Hess* reference to make it consistent with a hood providing a tunnel passage as recited in Appellant's claims.

C. United States Patent No. 6,253,491 ("the *Pages* reference")

The *Pages* reference is commonly owned with this application. It discloses a window lifting mechanism arrangement previously developed by the owner of this application but does not include all of the elements of Appellant's claimed invention. The *Pages* reference includes a drum having an opening 21 in the cylindrical body of the drum for receiving an end 19 of the

cable. In Appellant's current invention that feature of a drum is eliminated so that the currently claimed invention represents a significant advancement in the art.

THE OBJECTIONS TO THE SPECIFICATION ARE IMPROPER

The Examiner objected to the disclosure as indicated on the first page of the final office action but, as repeatedly pointed out to the Examiner, Appellant made an amendment to the specification filed on February 1, 2001, that corrected the very error that the Examiner contends still exists. That objection must be withdrawn or reversed.

Another objection to the specification was for allegedly failing to provide proper antecedent basis for certain language in the claims. The drawings clearly show arrangements as described in the pending claims. While there may not be word-for-word correspondence between the claims and the specification, there is no such requirement in the law.¹

THE REJECTIONS UNDER 35 U.S.C. §112 ARE IMPROPER

Appellant has repeatedly tried to appease the Examiner in addressing the Examiner's concerns (although Appellant disagrees with the Examiner's position). The Examiner has repeatedly refused to enter an amendment after final that was intended to address the §112 issues raised by the Examiner for the first time in the final office action.

The Examiner has made several different rejections under 35 U.S.C. §112. In making these rejections the Examiner is either reading into the language of the claims too much and creating hypothetical unclarities or failing to take the entire language of the claims in context, which renders them clear.

As examples, the Examiner rejects claim 20 asserting that the recitation of "a second end" of the cable is unclear. Earlier in the claim the cable is recited as having two ends. The only thing that is unclear is how the claimed "second end" could be confusing to the Examiner since a cable having two ends necessarily has a first end and a second end.

Another alleged basis for the §112 rejection is that the Examiner finds it unclear how the end of the cable "is always in the arcuate passage." Reading the claim indicates that the end of the cable is not always in the passage. The claim recites that the end of the cable is received

¹ Additionally, Appellant attempted to amend the specification to include word-for-word correspondence with the claims but the Examiner refused to enter the amendment, even though the Examiner raised this objection to the specification for the first time in the final office action.

“through the arcuate passage and into the opening in the flange.” By definition, the word “through” necessitates that the claim be interpreted so that the end of the cable does not remain in the passage always but, instead, is received into the opening in the flange as recited.

Appellant respectfully submits that when the Board considers the claims pending in this application, it will be clear that there is no basis for the Examiner’s rejections under 35 U.S.C. §112 and that the language of the claims satisfies the statutory requirements.

THE DOUBLE PATENTING REJECTION IS IMPROPER

The Examiner has rejected claims 20-25, 36-38 and 41-43 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 4-6, 8 and 13 of the *Pages* reference in view of the *Sessa* reference. According to the Examiner, it would be obvious to include a flange that extends radially outward further than the grooves “to increase the stability of the drum as it rotates and to prevent the drum from rotating when the vehicle window is at least partially rolled up.”

In order to establish a *prima facie* case of obviousness (even in an obviousness-type double patenting rejection) there must be some motivation to modify a reference. There would be no benefit to adding the flange of the *Sessa* reference to the drum of the *Pages* reference and, therefore, there is no motivation to make the proposed combination. The *Pages* reference includes a drum having an opening 21 in the cylindrical body of the drum (i.e., *not* in a radially extending flange). There would be no benefit to adding the flange of *Sessa* because the drum of the *Pages* reference is already situated to accommodate the end of a cable according to the teachings of that reference. Moreover, there is no suggestion that the *Pages* reference needs any flange to increase stability of that arrangement nor is there any suggestion within the *Sessa* reference that its flange would provide stability to any arrangement, let alone that shown in the *Pages* reference.

Apart from that, adding the “flange” of *Sessa* does not make *Pages*’ device any more useable. There would be no facilitation of the end of a cable being received into the pocket near the reference number 12 in the *Sessa* reference by utilizing the hood 12 of the *Pages* reference.

Therefore, there is no benefit or motivation for making the proposed combination suggested by the Examiner.²

Additionally, even if one were to combine the teachings of the *Sessa* reference with the *Pages* reference, the result would not be the same as Appellant's claimed invention. When you combine those two references (which Appellant submits cannot properly be done as discussed above), the result is not the same as Appellant's claimed invention. The unlabeled pocket in the underside of the *Sessa* device (receiving the end 12) is not the same as the claimed opening in the flange. Therefore, the result is not the same as the claimed invention. The *Sessa* reference discusses addressing pre-tensioning issues and is apparently situated to accommodate a pre-wound cable (i.e., not one that would be wound in the manner that is facilitated by Appellant's claimed invention).

Further, the teachings of the *Sessa* reference are directed toward accommodating gearing within the arrangement to limit the size of the arrangement. There is no discussion of accommodating an end of a cable while winding that cable about a drum. Accordingly, Appellant's claimed invention addresses a significantly different problem than that in the *Sessa* reference and there is no motivation to use the teachings of the *Sessa* reference in combination with the teachings of the *Pages* reference as suggested by the Examiner.

THE REJECTIONS UNDER 35 U.S.C. §102 ARE IMPROPER

The Examiner rejected claims 36-38 under 35 U.S.C. §102(b) as being anticipated by the *Hess* reference. The Examiner improperly interprets Figure 1B of the *Hess* reference as including the elements of Appellant's claims 36-38. As pointed out above, the surfaces 12 and 16 (numbered in Figure 1A but not Figure 1B) must contact each other so that the rolling surface 12 is accommodated by the bearing surface 16 to support the drum within the bracket 6. There is no provision anywhere within the *Hess* reference for a tunnel that guides and supports an end of the cable prior to the end being inserted into the opening in a flange as required by Appellant's claim 36. There is no "flange." There is no "tunnel." As such, there cannot be any anticipation.

² Appellant was willing to submit a terminal disclaimer to negate the obviousness-type double patenting rejection if the Examiner were willing to otherwise indicate the claims to be allowable. Given the Examiner's refusal to enter an amendment that would have placed the case into condition for allowance under the Examiner's own admission of allowable subject matter, Appellant found it to be pointless to submit a terminal

If the end of the cable were received in the opening 42 in the embodiment of Figure 1B of the *Hess* reference, the bracket 6 would have to be placed onto the drum after the cable was pre-wound onto the drum. There is no correspondence between the elements of the *Hess* reference and the features recited in claims 36-38.

The Examiner rejected claim 36 under 35 U.S.C. §102(e) as being anticipated by the *Pages* reference. As mentioned above, the *Pages* reference does not include a radially extending flange at one end of the drum body portion. Instead, at most, the drum in the *Pages* reference includes an axially extending portion of the cylindrical drum body (not a flange) that includes an opening 21 for accommodating an end 19 of the cable. Because there is no flange, there is no corresponding opening in the flange as required by claim 36. The absence of a radially extending flange from the *Pages* reference as recited in Appellant's claim 36 necessitates that the rejection under 35 U.S.C. §102(e) be reversed.

THE REJECTIONS UNDER 35 U.S.C. §103 ARE IMPROPER

The Examiner has rejected claims 20-25, 36-38 and 41-43 under 35 U.S.C. §103 as being unpatentable over the *Sessa* reference in view of the *Pages* reference. The Examiner contends that it would have been obvious to provide the arrangement of the *Sessa* reference with the hood of *Pages* "to prevent contaminants from getting into the winding drum." There would be no benefit to adding the hood of *Pages* to the winding drum of the *Sessa* reference. Without any benefit to making a combination, there is no motivation and no *prima facie* case of obviousness. It is axiomatic that there must be a motivation to make the combination. The absence of any motivation here renders the rejection improper.

The Examiner's supposed reason for finding motivation to add the hood of *Pages* is to "prevent contaminants from entering the drum" but even the hood of *Pages* would not do this. As clear from the drawings in the *Pages* reference, the hood does not completely encircle the drum. It is impossible to conceive, therefore, how the hood would prevent contaminants from entering the drum area. Even if there were proper motivation, which there is not, the Examiner's reasoning would not provide the result that the Examiner suggests.

Additionally, even if one were to make the combination of the two references, the result is not the same as Appellant's claimed invention. This was discussed in regard to the double

disclaimer in this regard. As pointed out, a terminal disclaimer is not necessary because the rejection is improper.

patenting rejection above. No combination of the cited references results in Appellant's invention as claimed.

CLAIM 20 IS ALLOWABLE

Claim 20 recites, in part, "A drum...including a flange extending radially outward...including an opening extending axially through the flange" and a hood having a side wall cooperating with a portion of the drum flange "to form an arcuate passage, a second end of the cable being received through the arcuate passage and into the opening in the flange." There is no teaching within the cited references for such a combination. No reference alone or combined with the others provides for such an arrangement. Additionally, a simple reading of claim 20 reveals that the claim clearly recites what is covered by the claim.

CLAIM 21 IS ALLOWABLE

Claim 21 recites particular limitations of the hood that are one example way of implementing the invention of claim 20. These limitations are believed to carry patentable weight separate from the patentability of claim 20.

CLAIMS 22-24 ARE ALLOWABLE

Claims 22-24 include more details regarding the opening in the flange and in particular include a ramp that facilitates inserting the end of the cable into the opening in the flange. None of the cited references have anything that can reasonably be considered the same as or suggesting the limitations recited in claims 22-24.

CLAIM 25 IS ALLOWABLE

Claim 25 recites projections extending from the drum flange in an axial direction that cooperate with brake box projections to provide a desired rotation of the drum. These limitations contain subject matter that is separately patentable in addition to the reasons why claim 20 is allowable.

Claims 26 and 27 are objected to but already allowable.

CLAIM 36 IS ALLOWABLE

Claim 36 recites, in part, “A winding drum...having a radially extending flange at one end of the body portion, the flange including an opening.” Claim 36 also recites, “A hood having...a passage portion having a second, larger radial dimension, the passage portion and the drum flange cooperating to form a tunnel that guides and supports an end of the cable prior to the end being inserted into the opening in the flange.” Such an arrangement is not shown within any of the references and even if one were to combine the references as suggested by the Examiner (which Appellant contends cannot be done for the reasons stated above) the result would not be the same as the claimed invention.

CLAIM 37 IS ALLOWABLE

Claim 37 recites a particular relationship between the drum flange dimensions and the passage portion of the hood. The particulars of this dimensional relationship are believed separately patentable.

CLAIM 38 IS ALLOWABLE

Claim 38 adds projections from the drum flange that cooperate with brake box projections to achieve a desired rotation of the drum. These additional limitations are separately patentable subject matter compared to that contained within independent claim 36.

The Examiner has already admitted that claims 39 and 40 contain allowable subject matter.

CLAIMS 41-43 ARE ALLOWABLE

Claim 41 includes a ramp adjacent to opening in the flange that facilitates insertion of the cable end into the opening. Such a ramp is not found anywhere within the cited references. The inclusion of a ramp in claim 41 makes that claim separately patentable from the independent claim 36. The dependencies of claims 42 and 43 make them separately patentable from claim 36 as well.

CONCLUSION

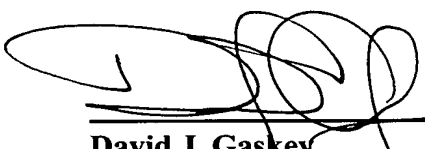
The Examiner's rejections under 35 U.S.C. §112 raised for the first time in the final office action are not warranted. There is no anticipation by any of the cited references. There is no proper motivation to make the proposed combinations and no *prima facie* case of obviousness under 35 U.S.C. §103. Even if there were proper motivation, the result of combining the teachings of the cited references is not the same as Appellant's claimed invention. In summary, there is no basis for not allowing this application.

Every rejection and objection made by the Examiner should be reversed.

Respectfully solicited,

CARLSON, GASKEY & OLDS, P.C.

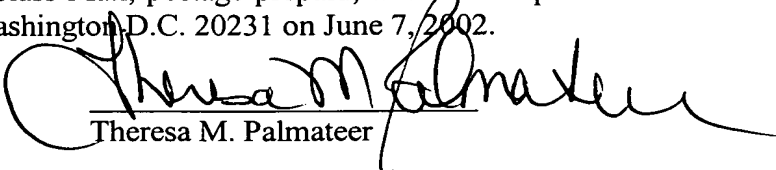
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CERTIFICATE OF MAIL

I hereby certify that the enclosed **Appeal Brief and Fees** is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Assistant Commissioner of Patents, Washington D.C. 20231 on June 7, 2002.



Theresa M. Palmateer

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APPENDIX OF CLAIMS

20. A device for raising and lowering a vehicle window, comprising:

a cable having two ends;

a drum having a plurality of grooves on an outer surface of the drum for receiving portions of the cable, a first end of the drum having a receiver that receives one of the cable ends, a second end of the drum including a flange extending radially outward further than the grooves, the flange including an opening extending axially through the flange; and

a hood having a sidewall partially surrounding the drum, the sidewall and a portion of the drum flange cooperating to form an arcuate passage, a second end of the cable being received through the arcuate passage and into the opening in the flange.

21. The device of claim 20, wherein the hood sidewall includes a first axial portion, a radially extending portion and a second axial portion that extends between the radially extending portion and the drum flange and wherein the second end of the cable is received between the radially extending portion and the drum flange and the second axially extending portion and the drum body, respectively.

22. The device of claim 20, wherein the opening in the flange is adjacent a ramp that extends at an angle relative to an axis of the drum.

23. The device of claim 22, wherein the ramp is positioned at an angle of approximately 45 degrees relative to the axis of the drum.

24. The device of claim 22, including a sidewall on opposite sides of the ramp, each sidewall extending in a direction generally parallel to the axis of the drum.

25. The device of claim 20, including projections extending from the drum flange in an axial direction and including a brake box having projections that cooperate with the flange projections such that rotation of the brake box projections causes rotation of the drum.

26. The device of claim 25, wherein the opening in the flange extends into one of the drum flange projections.

27. The device of claim 26, wherein the one drum projection includes an angled ramp surface that is angled relative to an axis of the drum, the angled surface guiding the second end of the cable into the opening.

36. A vehicle window raiser assembly, comprising:

a cable;

a winding drum having a body portion that has a plurality of grooves that support a portion of said cable for winding said cable, the drum having a radially extending flange at one end of the body portion, the flange including an opening; and

a hood having a sidewall extending along a portion of the length of the drum body at a first radial dimension and a passage portion having a second, larger radial dimension, the passage portion and the drum flange cooperating to form a tunnel that guides and supports an end of the cable prior to the end being inserted into the opening in the flange.

37. The assembly of claim 36, wherein the drum flange has a radial dimension that is approximately equal to the second radial dimension of the passage portion of the hood.

38. The assembly of claim 36, including projections extending from the drum flange in an axial direction and including a brake box having projections that cooperate with the flange projections such that rotation of the brake box projections causes rotation of the drum.

39. The assembly of claim 38, wherein the opening in the flange extends into one of the drum flange projections.

40. The assembly of claim 39, wherein the one drum projection includes an angled ramp surface that is angled relative to an axis of the drum, the angled surface guiding the second end of the cable into the opening.

41. The assembly of claim 36, wherein the opening in the flange is adjacent a ramp that extends at an angle relative to an axis of the drum.

42. The assembly of claim 41, wherein the ramp is positioned at an angle of approximately 45 degrees relative to the axis of the drum.

43. The assembly of claim 41, including a sidewall on opposite sides of the ramp, each sidewall extending in a direction generally parallel to the axis of the drum.